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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,232	04/13/2005	Sophie Marquais-Bienewald	HM/15-22768/A/PCT	4634
324 7590 06/26/2007 CIBA SPECIALTY CHEMICALS CORPORATION PATENT DEPARTMENT 540 WHITE PLAINS RD P.O BOX 2005 TARRYTOWN, NY 10591-9005			EXAMINER HAVLIN, ROBERT H	
			ART UNIT 1609	PAPER NUMBER
			MAIL DATE 06/26/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/531,232

Applicant(s)

MARQUAIS-BIENEWALD ET AL.

Examiner

Robert Havlin

Art Unit

1609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-18 and 20-23 is/are pending in the application.
- 4a) Of the above claim(s) 13-18 and 20-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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### DETAILED ACTION

**Status of the claims:** Claims 1-11, 13-18 20-23 are currently pending. Claims 1-2, 4-6, 9, 13-18, and 20-23 were amended when filed. Claims 12 and 19 were cancelled.

**Priority:** This application is a 371 of PCT/EP03/11384 (10/14/2003) and claims priority of EUROPEAN PATENT OFFICE (EPO) 02405898.4 (10/21/2002) and SWITZERLAND 0091/03 (01/22/2003).

**IDS:** The IDS filed on 7/15/2005 has been considered.

### *Election/Restrictions*

1. Applicant's election with traverse of Group I:

*Group I, claims 1-11 in part, drawn to a product of Formula I, wherein there are no heterocyclic components of the structure.*

in the reply filed on 04/02/2007 is acknowledged. The traversal is on the ground(s) that the reference cited by the examiner demonstrating a lack of a novelty relative to the prior art teaches biphenyl amides and not biphenyl amines. This is not found persuasive because the references cited below, which anticipate the claims, clearly demonstrates a lack of a contribution over the prior art. Therefore, the claims lack a special technical feature and restriction is proper. Therefore the application lacks unity of invention (see CFR 37 section 1.475).

The requirement is still deemed proper and is therefore made FINAL.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 11, rejected under 35 U.S.C. 102(b) as being anticipated by Schwander et al. (US 4,562,249).

Schwander et al. teaches in table 1 in example #9 (col. 11) the compound

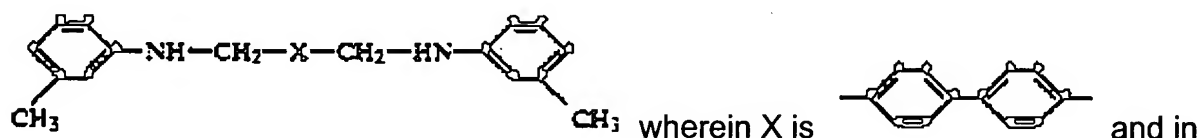
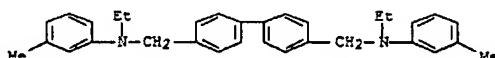


table 2, example #20 (col. 15)



which anticipates

the claims.

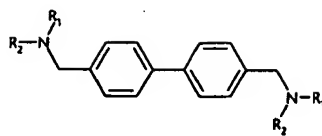
### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodson et al. (British J. of Pharm. And Chemotherapy, 1948, v. 3, p. 62-71), Khanna et al. (J. Sci. and Indust. Res., 1955, v. 14B, p. 214-219) and Birnie et al. (Antimicrobial Agents and Chemotherapy, 2000, v. 44, p. 2514-2517).

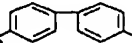
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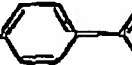


The claims read on compounds of the formula  
 R2 are hydrogen and varying types of alkyl.

Determination of the scope and content of the prior art

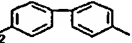
**Khanna et al.** (J. Sci. and Indust. Res., 1955, v. 14B, p. 214-219) teaches the

compound  $(n\text{-Pr})_2\text{N}-\text{CH}_2$    $\text{CH}_2-\text{N}(\text{Pr}-n)_2$  as a pharmaceutical including a genus of

compounds with the core formula:  $\text{N}-\text{CH}_2$    $\text{CH}_2-\text{N}$ . The reference also teaches in paragraph 1 of page 215 amine substitutions with iso -propyl, -butyl, and -amyl (also known as -pentyl) which are all branched alkyl groups. Although the products taught in the tables are all quaternary ammonium salts, they are all obtained in a one-step halogenation reaction with the corresponding amine.

**Goodson et al.** (British J. of Pharm. And Chemotherapy, 1948, v. 3, p. 62-71) teaches

the compounds 83 and 96 in table I with the structures:  $(\text{C}_4\text{H}_9)_3\text{N} \cdot \text{CH}_2$   ,

and  $n\text{-BuNH}-\text{CH}_2$    $\text{CH}_2-\text{NHBu}-n$ . These two compounds (as well as many others) were specifically shown to have activity *in vitro* as an amoebicidal agents. The reference also cites prior work with related compounds as antibacterial agents.

**Birnie et al.** teaches the desirability of modifying alkylamine chains to increase antimicrobial activity.

Differences between the prior art and the claims

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The difference between the claims and the prior art is that the claims proviso out the compound where R1 is hydrogen and R2 is butyl; R1 and R2 are both butyl; and R1 and R2 are both propyl. However, the claims also specifically claim iso-propyl and iso-butyl (claims 6 and 7). In addition, claim 8 recites R1 is hydrogen and R2 is octyl.

The prior art teaches compounds where R1 is hydrogen, n-butyl, and n-propyl, but it does not teach octyl. In addition, the prior art mentions the combination of iso-butyl in the structure (and discusses it's reduced activity), however, it does not recite the specific combination with the dibenzylamine core.

*Finding of prima facie obviousness – rationale and motivation*

The problem the application attempts to address is a preservative with antimicrobial activity. Goodson et al. and Birnie et al. address this same problem and Goodson et al. teaches the same class of compounds to solve it. Goodson et al. teaches numerous compounds with varying substitutions at the amine position including longer and shorter alkyl chains in an attempt to optimize the effectiveness of the compound. One of ordinary skill in the art would have reasonably been expected to have been apprised of Goodson et al.'s work and furthermore would have arrived at the claimed invention through routine experimentation commonly used in the chemical arts and suggested by the teachings of Birnie et al. Thus extending the alkyl chain as taught by Goodson et al. from four to eight carbons is obvious. Similarly, it would also have been obvious to one of ordinary skill in the art to take compound 83 of Goodson et al. (where both alkylamines are n-butyl) and extend them to an eight carbon chain.

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Although Khanna et al. is not in the identical field as the instant invention, it is in the closely related pharmaceutical arts. In addition, the structural similarities of the compounds of Khanna et al. to those of Goodson et al. would have reasonably led a person of ordinary skill in the art to the teachings of Khanna et al. (they both contain bis-alkylbenzylamines which is the same as the instant invention). Furthermore, one of ordinary skill in the art would have been motivated by the teaching of iso-propyl, -butyl, and -amyl of Khanna et al. to make a similar modification in view of Goodson et al. and arrive at the claimed invention. Therefore all of the claims are obvious.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The use of the terms "butyl" and "propyl" in the proviso of claim 1 is inconsistent with the dependent claims. Since claim 7 includes iso-butyl and iso-propyl, it is unclear what the applicant means by the terms. Appropriate language would indicate "n-butyl" for example to remove ambiguities caused by the different definitions in the claims.

***Conclusion***

All claims are rejected.

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***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Havlin whose telephone number is (571) 272-9066. The examiner can normally be reached on Mon. - Fri., 7:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful the examiner's supervisor, Cecilia Tsang can be reached at (571)-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert Havlin  
Examiner

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